

CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1 - 31. Cancelled.

32 (Currently Amended). The non-naturally occurring AAV according to claim 59, ~~wherein said AAV further which~~ comprises a minigene having AAV inverted terminal repeats and ~~the a~~ heterologous gene operably linked to regulatory sequences which direct its expression in a host cell.

Claims 33 – 42. Cancelled.

43 (Currently Amended). A composition comprising ~~an~~ the non-naturally occurring AAV according to claim 59 and a physiologically compatible carrier.

Claim 44. Cancelled.

45 (Currently Amended). A method of delivering a transgene to a cell, said method comprising the step of contacting the cell with ~~an~~ non-naturally occurring AAV according to claim 59, wherein said rAAV comprises the transgene.

Claims 46 – 58. Cancelled.

59 (Currently Amended). A non-naturally occurring adeno-associated virus (AAV) comprising an AAV9 capsid, wherein the AAV9 capsid is at least 95% identical to the amino acid sequence of SEQ ID NO: 123 over amino acids 1 to 736.

60 (Currently Amended). A non-naturally occurring adeno-associated virus (AAV) comprising an AAV9 capsid, wherein the AAV9 capsid comprises an AAV9 capsid protein selected from the group consisting of:

vp1 capsid protein, amino acids (aa) 1 to 736, SEQ ID NO:123;
vp2 capsid protein, aa 138 to 736, SEQ ID NO: 123 ; and
vp3 capsid protein, aa 203 to 736, SEQ ID NO: 123.

61 (Currently Amended). The non-naturally occurring adeno-associated virus (AAV) according to claim 60, wherein the AAV9 capsid protein is encoded by a nucleic acid sequence selected from the group consisting of:

vp1, nucleotides (nt) 1 to 2211;
vp2, nt 411 to 2211; and
vp 3, nt 609 to 2211;

wherein the nucleotides numbers are of AAV9, SEQ ID NO: 3.

62 (Currently Amended). A composition comprising an non-naturally occurring AAV according to claim 60 and a physiologically compatible carrier.

63 (Currently Amended). A method of delivering a transgene to a cell, said method comprising the step of contacting the cell with an AAV according to claim 65 60, wherein said rAAV minigene comprises the transgene.

64 (Currently Amended). The method according to claim 63 45, wherein the transgene is selected from the group consisting of: low density lipoprotein (LDL) receptor, high density lipoprotein (HDL) receptor, the very low density lipoprotein (VLDL) receptor and a scavenger receptors.

65 (Currently Amended). An adeno-associated virus (AAV) comprising an AAV9 capsid, wherein the AAV9 capsid is at least 95% identical to the amino acid sequence of SEQ ID NO: 123 over amino acids 203 to 736 and wherein said AAV further comprises a minigene having AAV inverted terminal repeats and the heterologous gene operably linked to regulatory sequences which direct its expression in an host cell.

66 (Previously Presented). The adeno-associated virus according to claim 65 wherein the AAV capsid is at least 95% identical to the amino acid sequence of SEQ ID NO: 123 over amino acids 203 to 736 and at least 90% identical to the amino acid sequence of SEQ ID NO: 123 over amino acids 1 to 736.